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ABSTRACT

Phonics instruction was taught two ways to 63 predominantly black tenth graders in a Trenton, New Jersey high school to see if the approach used affected the gains made in phonics skills. One approach taught vowel and consonant sounds, while the other taught only consonant sounds. Thirty sessions of instruction over a period of 8 weeks were administered to the two groups from classes for severely retarded readers. The subjects were pretested and post-tested on phonics sections of standardized reading tests, a cloze comprehension test, and an intelligence test. There were no significant differences between the achievement of the two groups on any of the tests. All gains made were very slight and could not be attributed to the training during the study. Both groups did generally better with consonant recognition than vowel recognition. The author concluded that the teaching of phonics is not valid for retarded black high-school-age readers. Further study is suggested using other teaching approaches and less threatening tests. Tables, references, sample tests, and lists of instructional materials used are included. (AL)

TEACHING PHONICS ANALYSIS WITH VOWELS AND CONSONANTS AND WITH CONSONANTS ONLY

A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

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BY

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ABSTRACT

PROBLEM

The main problem was as follows: to teach phonics skills including vowel sounds and generalizations to one group of tenth graders and to teach phonics skills including only consonants to another group of tenth graders and to analyze the results of pre-tests and post-tests administered for significant differences in phonics knowledge and reading comprehension.

A secondary problem was to correlate the results of the pre-tests and the post-tests with standardized reading comprehension scores and I. Q. scores.

PROCEDURES

One group was given 30 daily sessions of instruction in vowel and consonant sounds and generalizations by the investigator during the students' regular English classes. During the same period another group received instruction in consonants only with no direct teaching of vowels.

Three phonics tests served as pre-tests and post-tests. They were the Comprehensive Group Diagnostic Phonics Inventory, sections of the "Phonics Mastery" test in the Botel Reading Inventory, and the Fry Brief Individual Phonics Survey. Two

selections from the Reading Attainment System, with the cloze technique applied, served as pre-tests and post-tests for reading comprehension. The pre-test and post-test results were correlated with reading comprehension scores on the Gates-MacGinitie Reading Survey, Form E2M, and with I. Q. scores on the Henmon-Nelson Test of Mental Ability.

RESULTS

The following results were obtained:

1. There were no significant differences between the vowel group and the consonant only group in any of the measuring instruments, either for total tests or any vowel and consonant sub-tests.

2. Gains were made by both groups in all total tests and in total vowels and total consonants on all three phonics tests, but all gains were very slight and could not be attributed to the training.

3. The consonant only group showed no significant gains in consonants compared to the vowel group even though the former group received instruction in consonants only.

4. Both groups generally did better in consonants than in vowels (on percentage of correct responses) on pre-tests and post-tests.

5. Both groups scored best in correct responses on the

CGDPI.

6. Both groups scored lowest in correct responses on the Fry Phonics Inventory.

7. Both groups had difficulty with the cloze comprehension tests.

CONCLUSIONS

The investigator does not believe that the teaching of phonics has validity for retarded high school age readers who are black.

Lack of growth for both groups could be attributed to the length of the study, the nature of the tests, and the characteristics of the population.

CHAPTER I

INTRODUCTION

The purpose of this study was to see if teaching phonics without vowels is better than teaching complete phonics. One group of retarded readers received phonics instruction in all vowel and consonant sounds and generalizations; a second group received instruction in consonants only. The subjects were receiving remedial instruction in corrective reading classes. The rationale for using a remedial situation follows.

Rationale

A group of retarded readers on third grade level and beyond has already been exposed to the teaching of vowel sounds and generalizations in the usual fashion. As shown by their functional levels and phonics testing, however, they have not usually mastered this phase of word analysis technique.

Attempting this study in a normal first or second grade situation would have been fruitless. It might be expected that, given a normal first or second grade group, the group taught

vowel generalizations will demonstrate proficiency in vowel recognition on phonics post-testing and the group not taught vowels will not evidence a knowledge of vowel generalizations.

In the remedial and corrective groups, furthermore, the students have been exposed to other word attack aids, namely, sight word drill, all consonant sounds, structural analysis, use of context clues, comprehension skills, etc. This would not be the case with first or second graders.

In addition, a first or second grade study may interfere with or contradict the normal sequence of reading instruction taught in these grades. This could be a detriment to the subjects and would add another uncontrollable variable to the situation.

Background

The members of a remedial or corrective population are retarded more or less severely in their reading. In most cases, one symptom of this retardation is poor word analysis skills (Harris, 1964; et al). In providing remedial and corrective teaching for these students (the majority being urban blacks), the area which often proves to be the least successful in terms of grasping of the concepts involved and applying them to actual reading situations is the teaching of vowel discrimination and vowel sounds and generalizations. This is because of a variety of factors, including poor

auditory discrimination (Deutsch, 1962), speech difficulties, interference of dialect speech (John, 1962), language background, a negative or indifferent attitude toward reading, inability to relate sound and symbol (Christine and Christine, 1964), and lack of concept formation (Figurel, 1964; Braun, 1963). Consequently, the direct teaching of vowel sounds and rules in a program of remedial and corrective reading may prove fruitless and even compound the student's difficulty. The utility of vowel generalizations, moreover, often proves to be quite low (Chapter II, "Utility of Phonics Generalizations").

The investigator's study provided teaching to one group consisting of phonics instruction in vowel and consonant sounds. Another group received instruction in consonants only. Pre-tests and post-tests covering phonics skills and a brief exercise in reading comprehension were administered in order to make comparisons and draw conclusions. Correlations among these tests and standardized reading and I. Q. tests were also computed.

I. THE PROBLEM

The problem was as follows: Will a group taught vowel and consonant sounds learn more phonics than a group taught consonant sounds only? More specifically, which group will record higher on vowel, consonant, and total scores of several phonics tests?

II. DEFINITION OF TERMS

Phonics is defined as "a facet of reading instruction teaching speech sounds of letters and groups of letters in words." (Heilman, 1964)

Phonics Analysis is defined as "the process of sounding letters or letter combinations to arrive at the pronunciation of words." (Heilman, 1964)

A phonics principle or generalization is a rule which theoretically applies to all occurrences of a particular sound-letter correspondence, e.g., "When two vowels are adjacent in a syllable, the first vowel is long and the second vowel is silent."

Remedial and corrective are used in this study as defined by Harris (1964). The investigator submits that both are applicable to all subjects because the training was conducted within regular English classes using remedial techniques and materials.

III. LIMITATIONS OF THE STUDY

The limitations of the study included the following points:

1. The intervening variables occurring between pre-testing and post-testing involved the following factors:

   a. classwork outside of the controlled instructional period engaged in by some of the subjects to a greater or lesser degree.

b. teacher emphasis, which may have varied, but could have affected both vowel and consonant only groups equally [illegible] hance.

c. student motivation, again affecting both groups.

d. teacher rapport with students which could produce more positive results in certain subjects.

2. The number of participants in the study and the analysis of data was relatively small for various reasons. Therefore, because of absences at the time of testing, excessive absences during the training period, transfers into and out of the classes involved in the study, and drop-outs, the total number of students taking both pre-tests and post-tests in considerably less than the number of students in both groups at the beginning of the study. The number of students taking each of the tests varied also.

3. The length of the training period may not have permitted a sufficient amount of time to elapse in order for growth to be demonstrated by either group.

4. Three of the instruments used as pre-tests and post-tests are not standardized.

IV. OVERVIEW OF THE STUDY

Chapter II of the study consists of a review of the literature related to phonics and its methodology and usefulness.

Chapter III deals with the population studied; training sequence and materials; selection, description, and administration of testing instruments; and the statistical design employed. Chapter IV presents the results of the data and a discussion of the findings. Chapter V contains a summary of the study, conclusions, and suggestions for further research. A bibliography and appendices conclude the study.

CHAPTER II

SURVEY OF THE LITERATURE

The following questions formed the basis for the choice of material included in this chapter:

1. Does a knowledge of phonics contribute to reading proficiency?

2. How are phonics sounds and generalizations taught?

3. What is the utility of phonics generalizations?

4. Why do phonics sounds and principles cause difficulty for disadvantaged, black students?

5. How is phonics proficiency tested and how are strengths and deficiencies in phonics knowledge diagnosed?

I. PHONICS AND READING ACHIEVEMENT

As Betts (1956) pointed out, the research generally appeared to be clear that too much of an emphasis on phonics brings about word calling and a decrease in comprehension. An underemphasis on phonics, however, could produce guessing of words and incorrect comprehension.

There appears to be a substantial relationship between the ability to employ phonics skills and reading achievement (Harrington, 1953; Harrington and Durrell, 1955; Mack, 1953; Rudisill, 1957; Tiffin and McKinnis, 1940).

College students showed that mispronunciations accompanied inaccurate comprehension, but a certain kind of phonics training did not increase paragraph comprehension (Rogers, 1937).

There was a substantial relationship between letter naming performance and success in beginning reading (Davidson, 1934; Gates, 1922; Smith, 1928; Wilson, Fleming, Burke, and Garrison, 1938).

When teachers of grades three to six were given instruction on how to teach phonics, their students tended to achieve above expectancy (Gill and Gill, 1944).

One type of look-say method produced higher achievement in comprehension of sentences and paragraphs than a phonics method did (Tate, 1937).

One type of non-phonetic method tended to produce better understanding than a phonetic method (Gates, 1928).

Many low achievers in reading and retarded readers did not use satisfactory skills for attacking words (Gates, 1922).

The teaching of phonics to retarded seventh and eighth

graders was justifiable; it was more effective in the eighth grade (DeCelles, 1943).

A fourth-grade study showed a positive correlation between word analysis skills and comprehension (Benz and Rosemier, 1968).

II. PHONICS APPROACHES

Vowel sounds are taught as are other phonics principles. The approaches may be classified as analytic and synthetic, extrinsic and intrinsic, deductive and inductive. Analytic procedures start with whole words and teach letter-sound relationships through examination of sight words already known. Synthetic approaches teach letter-sound relationships first and these are combined to form words. Many phonics-oriented reading programs are synthetic in nature (Buchanan, 1966; Hay and Wingo, 1967; McCracken, 1966; Schoolfield and Timberlake, 1960; Spalding, 1962). Whether to classify such programs as Let's Read (Bloomfield and Barnhart, 1966) and the Merrill Linguistic Readers (Fries et al, 1966) as analytic or synthetic is open to discussion. Since they are primarily concerned with sound-letter correspondences, they might be classified as synthetic, despite disclaimers by Bloomfield (1942) and Fries (1932, 1966). Since they do not teach sounds in isolation, however, but always as parts of patterns (Bloomfield, 1942; Fries, 1962) or words, they might also be called analytic.

Rice (1970) lists basal reading programs according to an emphasis on phonics analysis, linguistic decoding, or language experiences. These programs are presented in Figure A (See Appendix I).

The extrinsic and deductive approaches to phonics may be considered together. Chall (1967) and others would term this category "snythetic" also. In these instances, phonics rules are presented and examples are provided to fit the rules. Those programs generally classified as synthetic would tend to emphasize generalizations first and could be termed "extrinsic-deductive."

The intrinsic approach (Gates, 1930; Harris, 1964) which is basically inductive (sometimes called "incidental") supplies examples of phonics principles in sight words and meaningful context and leads the student to arrive at the appropriate generalizations himself.

Controversy has been rampant as to which of the above approaches is most effective. Studies have been conducted which generally favor the analytic method (Cordts, 1925; Cordts, 1926; Cordts, 1927; Greene, 1923; Tate, 1937) or a basal reading approach supplemented by phonics instruction (Spencer, 1967).

Research has also been carried on which compared extrinsic and intrinsic phonics approache Again, results have

been mixed. Peyton and Porter (1926), Gates (1927), and Gates and Russell (1938) found in favor of intrinsic phonics. Henderson (1955) and Bloomer (1960) obtained results favoring extrinsic phonics. These studies compared the advantages of the two approaches at the end of first grade.

Piekarz (1964) offers some reasonable conclusions as does Gates (1927). He concludes as follows:

> In some of the earlier investigations --as suggested by such titles as "Phonics or No Phonics"--it has appeared that there was no choice other than to accept or reject the complete phonetic system. The intelligent procedure is to determine what phonetic devices, drills or instructions, if any, are of value, and how and when to use them.

III. SEQUENCE OF PHONICS INSTRUCTION

In many phonics sequences, whether analytic or synthetic, extrinsic or intrinsic, consonant sounds are introduced first followed by short vowels, or the two types of sounds are introduced almost simultaneously. This procedure pertains also to the linguistic methods. Heilman (1964) provides evidence in support of introducing consonant sounds first. Certain programs, however, introduce vowel sounds first. Examples of two would be the Carden Method (1965) and Phonetic Keys to Reading (1964). These methods emphasize an extreme reliance on sounding and depend

for success on the mastery of a large number of rules and generalizations. Heilman (1965) states some objections to this kind of program.

> Phonetic Keys provides for teaching children all the known rules including some which have very limited application. The data reported by Clymer, Oaks, and Burrows/Lourie, relative to the per cent of time various phonics rules actually apply, should be kept in mind as prospective users attempt to evaluate the materials under discussion... A reasonable rationale for attacking the middle of words has never been advanced... The major educational issues with which users and prospective users of these materials should be concerned include:
> 1. Should beginning reading instruction concentrate on sounding letters to the degree these materials advocate?
> 2. Should initial sounding begin in the middle of words?
> 3. Should children learn dozens of complicated phonic rules in the process of beginning reading?
> 4. Can sounding be "overemphasized? to the detriment of future reading facility?
> 5. Can beginning instruction result in pupils' developing a "set" to sound out each word met?
> 6. All facile readers recognize words as units and sound out only those few words they do not recognize as sight words. Should children be taught to sound out all words to the neglect of developing a sight vocabulary?

IV. UTILITY OF PHONICS GENERALIZATIONS

The evidence from research indicates that a major difficulty in mastering and applying phonics generalizations may result from the lack of usefulness of many of these generalizations, particularly vowel principles, in actual reading situations. Cordts (1925) applied phonics principles to vocabulary items selected from forty-two readers from the early 1900's. Only about one-half of the words examined could be taught according to phonics principles. Atkin (1926) studied frequencies of occurrence of letter symbols with only one pronunciation in words in Thorndike (1921). She found that only a few letters stood for only one sound, and she found a great many sounds for some of the symbols. Horn (1929) discovered forty-seven different sound-letter associations for the letter "A" alone.

Oaks (1952) investigated the applications of eight vowel principles in the vocabulary of basal readers of the 1930's from primer through grade three. One of her conclusions follows:

> The vowel principles were applicable in approximately 50 per cent of the total vowel situations. In general, the principles with high percentages of application represented a relatively small number of vowel situations.

Fry (1964) provides information based on frequency research

studies which is related to determining which phonics principles are worth teaching and in which order these principles may be taught. In the course of his article, he cautions as follows:

> ...this only acts as an illustration of the problem of phonics, or learning the phoneme-grapheme correspondence; namely, spelling rules are complex. If you don't attempt to simplify them as I have done, you run the risk of presenting a confusing maze that is too difficult for the primary teacher to present. On the other hand, if you simplify too much, then inaccuracies creep in and some "systems" seem to have as much weight as useful information.

Emans (1967) summarizes two studies made to test the utility of phonics generalizations. The first study referred to was one undertaken by Clymer (1963) in which he tested 45 phonics generalizations to a criteria of 75% utility and application to at least 20 words. The results showed that some long-honored phonics generalizations did not meet the criteria and needed revision. Of the 45 generalizations proposed by Clymer, 18 satisfied his criteria and 27 did not. Of the 18 that met the criteria, five referred to vowels. Of the 27 that did not meet the criteria, 17 concerned vowels. In the second study referred to by Emans, he replicated Clymer's study but used words beyond the primary level

in an attempt to discover whether some generalizations which were not useful on the primary level might become useful later. The results revealed that at least four generalizations which met the criteria on the primary level failed to do so on the secondary level, while three generalizations which were found not to be useful on the primary level were found to be useful for words beyond the primary level. When the results of the two studies were combined, only 21 of the 45 generalizations evaluated were found to be useful.

Burmeister (1968) reports and compares the findings of seven studies on the value of phonics generalizations. The studies included are Oaks (1952), Clymer (1963), Fry (1964), Bailey (1965), Emans (1966), Burmeister (1966), and Winkley (1966). All used utility levels to determine utility of phonics generalizations except Fry, who used a frequency approach, and Winkley, who used as a criterion application of the generalization to multisyllabic words because she felt that such a generalization would be useful to children in word attack. Burmeister offers some possible reasons for variations in the results of the studies: differences in types of material used as samples, differences in methods used in selecting sample words, differences in dictionaries used as authorities of acceptable pronunciation, differences in the authors' definitions of short and long vowel sounds, and differences in methods of

determining usefulness. She then supplies a brief explanation of each study and explains how she tabulated and compared the findings. She listed each generalization examined by any one of the studies and recorded the percentage of utility or the conclusion of usefulness of each author who examined the particular generalization. Based on the resulting data, she formed two groups: (1) those generalizations which are commonly included in instructional programs but have limited usefulness and (2) those having a high degree of usefulness. In the former group she lists eight principles (six concerning vowels) and in the latter group, she includes 23 rules (eight concerning vowels).

Stone (1966) classified over 6,000 sounds from the vocabulary of five basal readers. He found greater variability of sound-symbol relationships for vowels as compared to consonants. Of the vowels examined, 64% were regular; of the consonants examined, 89% were regular. Bailey (1969) and Burrows and Lourie (1963) reported low utility for the vowel digraph generalization.

V. EMPHASIS IN WORD ATTACK

Dolch (1938), Bloomfield (1942), Heilman (1964), and Fry (1964), among others, have pointed out that most words and syllables begin and end with consonants. When a word is analyzed by

phonic means, the beginning of the word is "attacked" first. The ending is of secondary importance. The middle of the word (where the vowel usually is) is last in importance in phonics analysis.

Gray (1960) cites evidence that mature readers use primarily configuration clues (based mainly on consonant shapes) and contextual setting to analyze words. Gray notes the fact that a passage may be fairly easily read even if the vowels are eliminated. Fry (1969) has also reported this result. Various reading materials are now tending to emphasize consonant sounds in connection with other recognition clues while deemphasizing vowel sounds (McKee et al, 1966).

VI. DIALECT SPEECH

Linguistics, especially in the study of phonology, has provided much evidence of the irregularity in the production and the perception of vowel sounds, influenced largely by regional and social dialects (Bolinger, 1968). More recent study is being conducted in the area of the inter-relations of speech and pronunciation with auditory discrimination, reading comprehension, word knowledge, and phonics approaches (Gross, 1967; Downing, 1965).

Research of the past few years has revealed various findings regarding teaching reading and language arts to the disadvantaged

black student. Labov (1966) in his study of black dialect notes several interesting points concerning letter sounds, some affecting consonants and others vowels, e.g., "E" and "I" are not distinguished before nasals. Initial consonants, however, tend to be pronounced as in standard English except for substituting "D" for "TH" and substitution in some blends, such as "SCR" for "STR." Labov states significantly that a student may not hear the difference between his pronunciation of a word and the teacher's pronunciation of it. This is more likely to occur with vowel sounds, particularly short vowels and diphthongs.

Venezsky (1967) notes that the ability to differentiate the environment of a sound, e.g., "A" in "rat" or "rate," is of more use than treating sounds in isolation.

Green (1963) gives his own examples of divergence between standard pronunciation and black dialect. Some of these differences are listed in Figure 1. Items numbered 1, 2, 3, 4, 10, 12, and 13 illustrate differences in vowel sounds. Other work in this area has been done by Labov (1967); Loman (1967); Shuy, Wolfram, and Riley, (1968); and Baratz (1969).

VII. PHONICS TESTING AND DIAGNOSIS

Many phonics tests are available, but most of them have

Figure 1

Typical Pronunciation Errors
of Negro Dialect

Non-standard Pronunciations
1. Such words as poem, oil, soil become perm, erl, serl.
2. Such words as work and girl become woik and goil.
3. Such words as uncle, hungry, until become unkle, hongry and ontil.
4. Such words as red and bread become rayed and brayed.
5. Such words as metal, little and treaty become medal, liddle and tready.
6. The final d and t sounds are rarely pronounced as in the words past (pass), post (pos').
7. The d and the t sounds also are dropped in such words as little (lil), medal (me-al) and industry (in-usry).
8. Such words as thrust, three, them become trust, tree, dem.
9. The final th becomes f or t in such words as oath (oaf), both (bof or boat).
10. Such words as store and door become stow and dough.
11. Distortion of the final l to o in such words as little - little becomes lidow.
12. The substitution of i for e in such words as cent, sense, men - cint, since, min.
13. The substitution of e for i in such words as thing and mint - theng, meant.

one or more inherent disadvantages for use with this study. Some are impractical to administer because they are suitable only for an individual situation or require too lengthy a time to complete. The highly elaborate and precise phonics instruments are often tedious both for administrator and testee. Several assume a skill proficiency of at least a second grade level. Others provide insufficient data as to validity and reliability, although making such claims. Another weakness is the failure to cover a sufficient range of examples for the basic letter sounds. Still other instruments are more properly word-recognition tests rather than tests of phonics ability. A list of phonics tests is given in Appendix I. All were found unsuitable for the purposes of the current study because of one or more of the reasons mentioned above. Winkley (1971) examines and compares nine phonics tests.

VIII. THE CURRENT STUDY

The majority of studies cited have demonstrated a positive effect of phonics skills on word recognition, vocabulary, and reading comprehension. Much disagreement arises as to the method, type, and amount of phonics instruction which should be utilized by teachers. Recent studies have tended to dispute the value of many phonics generalizations, particularly those involving vowels.

Linguistic study has attempted to turn attention to sound and symbol patterns and other features of total language experience and away from isolated and rigid emphasis on individual sound-letter correspondences. The convincing pronouncements of many linguists have demonstrated the existence of a language system utilized by urban blacks, a system differing substantially from standard English in sound and structure.

In light of these considerations and the investigator's teaching experience of six years, the current study was undertaken. The majority of phonics studies have not dealt with students beyond the eighth grade. The investigator has taught phonics skills to high-school age drop-outs (mostly urban and rural blacks) at a Job Corps center and to urban students (mostly black) in a city high school. The investigator confirms the difficulties with phonics utility and difference of dialect. A stress on consonant sounds, however, in conjunction with structural analysis, context clues, and other meaning signals, has often proved successful in improving word recognition and reading comprehension. In significantly fewer instances, emphasis on vowel sounds and principles has been successful, leading the investigator to virtual abandonment of teaching these specific items. Quite often, discussion of vowel principles appeared to cause additional confusion for remedial readers. The

investigator wished to make a controlled comparison between two groups of retarded readers on a high school level, whose basic language is the urban black dialect, in order to determine whether teaching vowel sounds and generalizations produced any significant advantage in one group. The evidence from the literature, particularly of the last ten years, and the investigator's experiences suggested no significant advantage would be found. Consequently, this study was implemented.

CHAPTER III

PROCEDURE

The study was conducted at Trenton Central High School in Trenton, New Jersey. Trenton High School, the only public high school within the city, has a student population of approximately 3,000. Approximately 70% of the students are black, five per cent Puerto Rican, and 25% white. The sophomore class numbers approximately 1,000. (Trenton High School accommodates grades 10, 11, and 12.) Members of the sophomore class are assigned to English classes on the basis of the results of standardized reading tests administered during the month of March while the students are still in ninth grade. In addition, I. Q. tests are administered at this time (Henmon-Nelson Tests of Mental Ability). In September, 1970, all below normal (local norms) sophomore English classes were tested by the author and another member of the reading department at the high school with the Gates-MacGinitie Reading Survey, Form E2M. The data in this study draws upon these I. Q. and reading test scores.

During the pre-testing, training period, and post-testing,

the investigator worked in lower-track English classes, which are in reality severely corrective reading classes. The investigator conducted all training sessions himself with the assistance of the regular English teachers. The subjects were not informed that they were part of a study, thus eliminating a possible Hawthorne Effect. The materials were presented as part of their regular instruction.

The reading levels of the students in the classes ranged from about three to seven grades below national norms according to the standardized reading tests. There were no total none-readers among the subjects.

I. POPULATION

The total number of subjects included in the study was sixty-three (63). Of this number, 55 were black, five were Puerto Rican (all with an adequate grasp of oral English), and three were white; 36 were boys, 27 were girls.

The classes were randomly divided by coin toss into two groups. One class received phonics instruction in vowel and consonant sounds and generalizations. The total number in this group was 33 (31 black, two Puerto Rican). The second group received instruction in consonant sounds and generalizations with no direct teaching of vowels. The total number in this group was 30 (24 black, three Puerto Rican, three white).

The investigator selected these particular classes for the following reasons:

1. Members of these classes were all severely retarded in reading.

2. The investigator's teaching schedule permitted him to work on a daily basis for approximately an eight-week period with these particular classes.

3. The regular English teachers involved with the classes were most cooperative.

4. The investigator was somewhat familiar with the characteristics of these specific classes and their students prior to conducting the study. For this reason and because of the "cultural bias" of standardized reading tests (Downing, 1965) and verbal I. Q. tests (Yourman, 1964), as well as the reasons cited above, the investigator chose to work with these classes (Browne, 1938; Lauriana, 1957; Wohleber, 1956).

II. TRAINING

The total period allotted for the study was approximately eight weeks. This consisted of six weeks of actual training plus additional time allowed for pre-testing and post-testing. The training period in actuality was 30 daily sessions since the period set aside

for the six weeks training was interrupted by two school holidays and an eight-day teachers' strike which resulted in complete interruption of the training period.

Pre-testing was completed during the week of January 25, 1971. The training period began on February 1, 1971, and concluded on March 29, 1971. Post-testing was accomplished from March 30 to April 2, 1971.

The training was conducted daily during the students' regular English classes. The length of the class period was 42 minutes. Classes during the training period were concerned with the specific phonics skills involved in the study, although students were encouraged to apply these skills to all of their reading. Materials used included work sheets, work books, filmstrips, magazines, and teacher-prepared exercises. The author was assisted by the regular English teachers.

The sequence of phonics skills taught to both groups is listed in Figure 2. An outline of skills presented in each of the 30 daily sessions for both groups is given in Figures 3 and 4.

Rationale for Choice and Sequence of Phonics Skills

The choice and sequence of phonics skills is based on examination of the opinions of other writers and on the investigator's personal teaching experience. There is disagreement among the

Figure 2

Sequence of Phonics Skills Taught

Phonics Skills
1. Auditory and visual discrimination
2. All consonant sounds (initial and final) in the following order: D, T, M, B, H, P, N, W, J, F, L, R, K, V, X, Y, Z, Q, S, C, G
3.[a] Short vowel sounds in this order: E, I, Y, O, U, A
4.[a] Long vowels in a. long vowel plus final silent "E" b. two vowels together: AI, AY, EA, EE, OA, OE, OW
5. Consonant substitution (initial and final)
6.[a] Vowel substitution (medial)
7. Consonant digraphs: CH, SH, TH, WH, GH, PH, NG
8. Two-letter consonant blends: "S" blends, "L" blends, "R" blends, "TW," "QU"
9. Three-letter consonant blends: SCR, SHR, SPL, SQU, STR, THR, SCH
10[a] Vowel plus "R": ER, IR, UR, OR, AR
11[a] Diphthongs and double vowels: OI, OY, OO, OU, AU, AW, OW, EW, UE
12[a] Exceptions to vowel "rules": # 3, 4, 10, 11
13 Silent consonants: KN, WR, MB, L, GH, CK, GN

[a]Consonant only group did not receive instruction in these skills.

Figure 3

Outline of 30 Instructional Sessions - Vowel Group

Session[a]	Phonics skills taught
1.	Auditory and visual discrimination
2.	All initial consonants
3.	Final consonants
4.	Hard and soft "C" and "G"
5.	Short "E"
6.	Short "I: and "Y"
7.	Short "E" and "I"
8.	Short "O", "U," and "A"
9.	All short vowels
10.	Vowel - consonant - final "E"
11.	Double vowels (digraphs)
12.	"Y" as a long vowel
13.	Review of long vowel p erns
14.	Digraphs - "TH"
15.	Digraphs - "CH" and "SH"
16.	Additional digraphs
17.	Final digraphs
18.	Initial blends - "S"
19.	Initial blends - "L"
20.	Initial blends - "R"
21.	Final blends
22.	Review - initial and final blends
23.	Three-letter blends
24.	Three-letter blends
25.	Vowels + "R"
26.	Difficult vowels (diphthongs)
27.	Difficult vowels (diphthongs)
28.	Exceptions to #26 and 27
29.	Silent consonants
30.	Silent consonants

[a]13 sessions of vowel instruction; 17 sessions of consonant instruction

Figure 4

Outline of 30 Instructional Sessions -
Consonant Only Group

Session	Phonics skill taught
1.	Auditory and visual discrimination
2.	Auditory and visual discrimination
3.	All initial consonants
4.	All initial consonants
5.	Final consonants
6.	Final consonants
7.	Hard and soft "C"
8.	Hard and soft "G"
9.	Consonant review
10.	Digraphs - "TH"
11.	Digraphs - "CH" and "SH"
12.	Additional digraphs
13.	Final digraphs
14.	Digraph review
15.	Initial blends - "S"
16.	Initial blends - "L"
17.	Initial blends - "R"
18.	Final blends
19.	Final blends
20.	Blend review
21.	Three-letter blends
22.	Three-letter blends
23.	Three-letter blends
24.	Review of all blends
25.	Silent consonants
26.	Silent consonants
27.	Consonant review
28.	Digraph review
29.	Blend review
30.	Student questions and/or observations

writers on the "best" sequence for teaching these skills. The order which the investigator proposes is an adaptation of Dechant (1964) and Heilman (1964). Based on his experience with older retarded readers in the age range of 15 to 21, the investigator submits this sequence as being practical and logical.

Sequence and Comments

1. Auditory and visual discrimination are universally recognized as necessary first steps.

2. Initial and final consonant sounds can be taught together since consonant sounds are consistent in most cases and the subjects of the study are familiar with whole words and frequently omit final consonants (a point for special emphasis). The order of consonants is adapted from Dechant (1964) with the following exceptions: (a) all consonants are covered, (b) "D" and "T" are stressed first because of some confusion involving these in black dialect, (c) "difficult" consonants and consonants representing two sounds are treated last.

3. Short vowel sounds are taught next in order to analyze many whole words and syllables. "E" and "I" are treated first because of difficulty in discrimination in the black dialect. "Y" is introduced as a short vowel.

4. Two patterns signaling long vowels are introduced next

in order to contrast with the short vowel pattern. Many additional words may now be analyzed. "Y" is introduced as a long vowel. This is useful because of frequency.

5. Consonant and (6) vowel substitution extends word analysis to many more words.

7. Consonant digraphs follow because they can cause difficulty and confusion; however, they also represent a single sound as have the above symbols. Particular attention is paid to "CH," "SH," and "TH."

8. With the preceding foundation, consonant blends are introduced. These are often difficult for retarded readers. Much practice is required. Two-letter blends may be constructed from single consonants. Three-letter blends, even more troublesome, follow (9).

10. Difficult vowels are next in sequence. Vowels followed by "R" are covered first because of a certain regularity and the correspondence among "ER," "IR," "UR," and sometimes "OR."

11. Diphthongs and other double vowel combinations are next. These are confusing and difficult to discriminate for retarded readers. There are numerous exceptions to expected double vowel behavior and the exceptions may be mentioned (12).

13. To conclude, silent consonants are treated, expecially

"KN," "WR," "CK," and GH."

Among the materials used for presentation and practice in phonics analysis were the following commercial products: Be A Better Reader (1963); "Working with Sounds," Specific Skills Series (1965); Basic Reading Skills for Junior High School Use (1957); Conquests in Reading (1962); The Magic World of Dr. Spello (1963); Basic Reading Skills for High School Use (1958); A Second Course in Phonetic Reading (1964); Scope magazine (weekly); Steps to Learning (1965); Phonics We Use (1966); and a series of filmstrips, Phonics, Basic and Intermediate (1965).

III. TESTING INSTRUMENTS

Four separate instruments were employed for pre-testing and post-testing. Each testing instrument was used both as a pre-test and a post-test. Three tests of phonics knowledge and one test of reading comprehension were utilized. A description of each and the reason for its selection follows.

Comprehensive Group Diagnostic Phonics Inventory (1970)

This test (referred to as the CGDPI) is an instrument constructed by Paul Fitch, a student in the Graduate School of Education at Rutgers University. The test was devised after an examination of many existing instruments for the testing and diagnosis

of phonics skills. The test is comprehensive, covering all vowel and consonant phonemes. It is practical to administer and can be given to a group in less than a typical class period. For these reasons, the investigator selected the CGDPI as a testing instrument. The testee is required to recognize nonsense syllables dictated by the tester from among groups containing four choices. A fifth choice is "don't know." The items at the end of Section Three of the test dealing with syllabication were not utilized in this study.

Botel Reading Inventory (1966)

For the purposes of the current study, only the "Phonics Mastery" section of the Botel inventory was used (excluding rhyming elements, syllabication, nonsense words). This section covers auditory recognition of consonant and vowel sounds. The tester reads a word and the testee is required to identify initial consonants, short vowels, etc. This test was selected as a testing instrument because it is comprehensive, can be used with students at any level of reading ability, and requires auditory discrimination of sounds. The "Phonics Mastery" test can be administered to a group in less than a typical class period.

Brief Individual Phonics Survey (1969)

This is a very brief phonics inventory by Edward Fry. It includes consonants, consonant digraphs, short vowels, long vowels, vowel digraphs, vowel diphthongs. The testee is required to read nonsense syllables to the tester. The test was selected for the study because the student is required to read, the test is brief (less than a page) yet individual, and a good sampling of sounds is covered.

Cloze Comprehension Tests (1967)

The final pre-test and post-test consisted of either one of two brief reading selections obtained from the Reading Attainment System published by Grolier, Inc. One of the selections concerned narcotics and the other was about the history of rock music. Reading levels of the two selections as reported by the publisher were 3.7 to 3.9. According to Fry's Readability Graph (1969), the level was second grade for both. These two selections were picked because of the interest factor and the reading level of the material. The cloze technique was applied to both selections with words being deleted from the text. This procedure has proved to be a useful teaching and testing device (Hafner, 1966). The choice of words deleted was the investigator's. Because of the reading

deficiencies of the subjects, the words deleted could, for the most part, be identified from relatively direct context clues. Also, several choices might be possible for a deleted word. For the pre-testing, the selections were distributed so that approximately one half of the subjects received each selection. For the post-testing, the subjects who received the selection on narcotics were given the selection on music and vice versa. The reason for using these instruments was to test reading comprehension.

Analysis of Phonics Tests

In each of the three phonics tests, six categories of sounds were considered. (The CGDPI included a seventh category, i.e., silent consonants.) The six categories were consonant sounds, consonant blends, consonant digraphs, short vowels, long vowels, and difficult vowels.

Certain disagreements are found in the literature regarding the exact descriptions of certain sounds such as digraphs, diphthongs, and others. For the purposes of this study, therefore, the following principles were established:

"Consonants" included all single consonants ("W," "X," "H," "S," hard and soft "C" and "G," etc.).

"Consonant Blends" included any blending of two or three

consonant sounds. No differentiation was made in the data between two and three-letter blends. The graphemes "QU" and "NK" were treated as blends since both are a blending of two sounds ("K" and "W" and "NG" and "K," respectively). For the same reason, "THR" and "SCH" were treated as blends.

"Consonant Digraphs" included instances of two letters representing one consonant sound, i.e., "TH," "SH," "CH," "PH," "WH," "NG."

"Short Vowels" included phonically regular occurrences for the short vowel sound (CVC).

"Long Vowels" included phonically regular occurrences for the long vowel sound ($\overline{V}\not{V}$, $\overline{V}C\not{E}$, $\overline{C}V$).

"Difficult Vowels" included vowel sounds which did not follow a short or long pattern, i.e., vowels followed by "R," "OO," "OU," "OW," "OI," "OY," "AU," "AW." An item consisting of a vowel followed by "R" was regarded as an example of a difficult vowel sound and a consonant sound.

"Silent Consonants" in the CGDPI included "K$\not$N," "W$\not$R," "G$\not$K," "G$\not$N," "G$\not$H." These were regarded as examples of a silent consonant and a consonant sound (except "G$\not$H).

Individual raw scores were obtained on each of the above mentioned sub-tests of each of the three phonics tests, on the

total vowels and the total consonants for each phonics test, on the total overall result of each phonics test, and on the cloze comprehension test.

The number of subjects included in the analysis to determine significant differences was small primarily because of transfers in and out of the classes, particularly for the consonant only group, during the training period. There were also students who were absent an excessive amount (more than once during every six sessions). Other students missed either a pre-test or a post-test. (Five days were allowed for pre-testing and six days for post-testing.)

The number of students taking each pre-test and post-test is listed in Table 1.

IV. STATISTICAL DESIGN AND TREATMENT OF DATA

After observation of the data, examination of various tests, and consultation of Siegel (1956), the investigator concluded that the non-parametrical Mann-Whitney U Test (1947) was the best instrument to use in analyzing significant differences in the observed data. This test was selected primarily for the following reasons:

1. Freedom from some characteristics of normal population distributions.

Table 1

Number of Students Taking
Pre-tests and Post-tests

Group	CGDPI	Botel	Fry	Comprehension
Vowel	20	12	16	21
Consonant Only	12	13	14	14
Total	32	25	30	35

2. Numbers were relatively small.

3. Difference in size of numbers between vowel and consonant only groups.

Each of the three phonics tests was examined to determine how many items tested each of seven phonics skills, i.e., consonants, consonant blends, consonant digraphs, short vowels, long vowels, difficult vowels, and silent consonants. This information is presented in Table 2.

Pre-tests and Post-tests were administered and raw scores (number of correct responses) were obtained for all sub-tests in each of the three phonics tests, for total vowels and total consonants on each phonics test, for total overall results on each phonics test, and for the comprehension test.

The null hypothesis (H_o) was proposed as follows: There will be no significant differences in scores for the three vowel sections of each phonics test or for the total vowel scores of each phonics test between the group which received instruction in vowels and consonants and the group which received instruction in consonants only.

Operations for the Mann-Whitney U Test were applied to the data with the following exceptions:

1. The "Silent Consonant" sub-test was not included since

Table 2

Number of Items Testing
Seven Phonics Skills
in Three Tests

Phonics skill	CGDPI	Botel	Fry
Consonants	28	18	24
Consonant blends	38	19	1
Consonant digraphs	8	5	6
Silent consonants	6	-	-
Total consonants	80	42	31
Short vowels	5	5	6
Long vowels	9	5	7
Difficult vowels	10	9	5
Total vowels	24	19	18

only one test dealt with silent consonants (CGDPI) and contained only six items.

2. The "Consonant Blends" sub-test in the Fry Test was not included since only one item ("QU") in the test was classified as a blend.

Difference scores between pre-tests and post-tests were ascertained for each subject and ranked. Ranks were added and "U" and "Z" statistics were determined. A significance level of .05 was applied to all results. The null hypothesis was accepted or rejected accordingly.

In addition to testing significant differences, raw scores obtained on all pre-tests and post-tests were correlated with standardized reading comprehension scores (Gates-MacGinitie Reading Survey, Form E2M) obtained in September, 1970, and the I.Q. scores (Henmon-Nelson Test of Mental Ability) obtained in March, 1970.

The following means were calculated for the purpose of comparing pre-test and post-test results within the vowel group and the consonant only group.

1. Total scores on each of the phonics tests and the comprehension test.

2. Total vowel scores on each phonics test.

3. Total consonant scores on each phonics test.

4. Scores on each sub-test of each phonics test.

CHAPTER IV

FINDINGS AND DISCUSSION

The analysis of data was concerned primarily with examining the differences in phonics recognition between the group which received instruction in vowel and consonant sounds and generalizations and the group which received instruction in consonants only. Secondarily, correlations were computed using all pre-test and post-test results, standardized reading comprehension scores as of September, 1970, and I. Q. scores as of March, 1970. The data, supporting information, and discussion follow.

I. FINDINGS

Vowel versus Consonant Only Group

The Mann-Whitney U Test was applied to the raw data obtained from pre-testing and post-testing as explained in Chapter III, "Statistical Design and Treatment of Data." Results of these operations are contained in Tables 3, 4, and 5.

There was no significant difference between the vowel group and the consonant only group on the total scores of all four pre-

tests and post-tests and for the total vowel scores and the total consonant scores on each of the three phonics tests and for the comprehension test (see Table 3).

There was no significant difference between groups on the total vowel scores and all vowel sub-tests on each of the three phonics tests (see Table 4).

There was no significant difference between groups on the total consonant scores and all consonant sub-tests on each of the three phonics tests (see Table 5). This table does not include data on the "Silent Consonant" section of the CGDPI or the "Consonant Blend" section of the Fry Test.

Correlations of Tests within Groups

Correlations of pre-tests, post-tests, standardized reading scores, and I. Q. scores are presented in Tables 6 and 7.

Gains within Groups

In order to report and comment on gains, if any, from pre-testing to post-testing within the two groups, mean scores were obtained for all total tests, total vowels and total consonants within each phonics test, and all sub-tests within each phonics test. These results are presented in Tables 8, 9, and 10.

Table 3

Results of Mann-Whitney U Test for
Total Tests, Total Vowels and
Total Consonants

Test	N	U	Z	Diff
CGDPI: Total	V=20; C=12	83.5	-1.920	N.S.
CGDPI: Vowels		92.5	-1.070	N.S.
CGDPI: Consonants		90.0	-1.167	N.S.
Botel: Total	V=12; C=13	58.5	-1.060	N.S.
Botel: Vowels		55.0	-1.251	N.S.
Botel Consonants		77.5	-0.027	N.S.
Fry: Total	V=16; C=14	103.0	-0.374	N.S.
Fry: Vowels		109.5	-0.103	N.S.
Fry: Consonants		101.0	-0.457	N.S.
Cloze comprehension	V=21; C=14	128.5	-0.623	N.S.

Table 4

Results of Mann-Whitney U Test for
Total Vowels and Vowel Subtests

Subtests	U	Z	Diff
CGDPI: Total Vowels	92.5	-1.070	N.S.
CGDPI: Short Vowels	114.0	-0.234	N.S.
CGDPI: Long Vowels	80.5	-1.577	N.S.
CGDPI: Difficult Vowels	116.0	-0.156	N.S.
Botel: Total Vowels	55.0	-1.251	N.S.
Botel: Short Vowels	49.5	-1.551	N.S.
Botel: Long Vowels	63.0	-0.816	N.S.
Botel: Difficult Vowels	56.5	-1.170	N.S.
Fry: Total Vowels	109.5	-0.103	N.S.
Fry: Short Vowels	109.5	-0.103	N.S.
Fry: Long Vowels	97.0	-0.624	N.S.
Fry: Difficult Vowels	109.0	-0.125	N.S.

Table 5

Results of Mann-Whitney U Test for
Total Consonants and
Consonant Subtests

Subtests	U	Z	Diff
CDGPI: Total Consonants	90.0	-1.167	N.S.
CDGPI: Consonants	110.5	-0.369	N.S.
CDGPI: Consonant Blends	81.0	-1.518	N.S.
CDGPI: Consonant Digraphs	119.5	-0.019	N.S.
Botel: Total Consonants	77.5	-0.027	N.S.
Botel: Consonants	67.5	-0.571	N.S.
Botel: Consonant Blends	48.5	-1.605	N.S.
Botel: Consonant Digraphs	76.5	-0.080	N.S.
Fry: Total Consonants	101.0	-0.457	N.S.
Fry: Consonants	111.5	-0.021	N.S.
Fry: Consonant Blends	104.5	-0.312	N.S.
Fry: Consonant Digraphs	91.0	-0.873	N.S.

Table 6

Correlations Among Pre-Tests and Post-Tests (Total Score, Total Consonants, Total Vowels), Standardized Reading Comprehension and I. Q. Scores for the Vowel Group

	1	2	3	4	5	6	7	8
1-CGDPI-Pre	1.00	.49	.80	.16	.61	.82	.73	.68
2-Botel-Pre	.49	1.00	.33	.09	.55	.92	.65	-.06
3-Fry-Pre	.80	.33	1.00	-.17	.46	.45	.84	.002
4-Cloze-Pre	.16	.09	-.17	1.00	.16	.17	.13	-.01
5-CGDPI-Post	.61	.55	.46	.16	1.00	.63	.51	.22
6-Botel-Post	.82	.92	.45	.17	.63	1.00	.61	-.53
7-Fry-Post	.73	.65	.84	.13	.51	.61	1.00	-.44
8-Cloze-Post	.68	-.06	.002	-.01	.22	-.53	-.44	1.00
9-Rdg. Comp.	.34	.25	.34	.20	.19	.18	.31	.05
10-I. Q.	.53	.27	.29	.12	.52	.66	.32	.39
11-CGDPI-C-Pre	.98	.48	.83	.12	.60	.82	.78	.65
12-Botel-C-Pre	.34	.94	.35	-.007	.36	.89	.49	-.16
13-Fry-C-Pre	.83	.36	.97	-.12	.49	.49	.85	.03
14-CGDPI-V-Pre	.90	.55	.53	.28	.59	.73	.52	.42
15-Botel-V-Pre	.60	.85	.18	.22	.63	.74	.75	.07
16-Fry-V-Pre	.58	.25	.87	-.25	.29	.26	.70	-.07
17-CGDPI-C-Post	.58	.53	.51	.08	.97	.53	.52	.22
18-Botel-C-Post	.74	.84	.33	.14	.54	.89	.43	-.49
19-Fry-C-Post	.74	.64	.81	.01	.52	.55	.95	-.36
20-CGDPI-V-Post	.54	.53	.24	.33	.83	.75	.37	.19
21-Botel-V-Post	.51	.72	.43	.06	.53	.82	.62	-.40
22-Fry-V-Post	.59	.46	.67	.18	.33	.63	.87	-.54

(continued)

Table 6 (continued)

	9	10	11	12	13	14	15
1-CGDPI-Pre	.34	.53	.98	.34	.83	.90	.60
2-Botel-Pre	.25	.27	.48	.94	.36	.55	.85
3-Fry-Pre	.34	.29	.83	.35	.97	.53	.18
4-Cloze-Pre	.20	.12	.12	-.007	-.12	.28	.22
5-CGDPI-Post	.19	.52	.60	.36	.49	.59	.63
6-Botel-Post	.18	.66	.82	.89	.49	.73	.74
7-Fry-Post	.31	.32	.78	.49	.85	.52	.75
8-Cloze-Post	.05	.39	.65	-.16	.03	.42	.07
9-Rdg. Comp.	1.00	.34	.32	.08	.27	.41	.46
10-I. Q.	.34	1.00	.51	.08	.37	.45	.48
11-CGDPI-C-Pre	.32	.51	1.00	.34	.86	.83	.55
12-Botel-C-Pre	.08	.08	.34	1.00	.37	.39	.65
13-Fry-C-Pre	.27	.37	.86	.37	1.00	.51	.21
14-CGDPI-V-Pre	.41	.45	.83	.39	.51	1.00	.64
15-Botel-V-Pre	.46	.48	.55	.65	.21	.64	1.00
16-Fry-V-Pre	.44	.08	.59	.29	.74	.46	.09
17-CGDPI-C-Post	.18	.50	.58	.34	.55	.49	.60
18-Botel-C-Post	-.008	.26	.74	.92	.35	.69	.52
19-Fry-C-Post	.31	.24	.79	.47	.84	.49	.76
20-CGDPI-V-Post	.19	.49	.46	.33	.24	.70	.60
21-Botel-V-Post	.36	.81	.52	.54	.47	.42	.80
22-Fry-V-Post	.24	.21	.65	.36	.63	.50	.53

(continued)

Table 6 (continued)

	16	17	18	19	20	21	22
1-CGDPI-Pre	.58	.58	.74	.74	.54	.51	.59
2-Botel-Pre	.25	.53	.84	.64	.53	.72	.46
3-Fry-Pre	.87	.51	.33	.81	.24	.43	.67
4-Cloze-Pre	-.25	.08	.14	.01	.33	.06	.18
5-CGDPI-Post	.29	.97	.54	.52	.83	.53	.33
6-Botel-Post	.26	.53	.87	.55	.75	.82	.63
7-Fry-Post	.70	.52	.43	.95	.37	.62	.87
8-Cloze-Post	-.07	.22	-.49	-.36	.19	-.40	-.54
9-Rdg. Comp.	.44	.18	-.008	.31	.19	.36	.24
10-I.Q.	.08	.50	.26	.24	.49	.81	.21
11-CGDPI-C-Pre	.59	.58	.74	.79	.46	.52	.65
12-Botel-C-Pre	.29	.34	.92	.47	.33	.54	.36
13-Fry-C-Pre	.74	.55	.35	.84	.24	.47	.63
14-CGDPI-V-Pre	.46	.49	.69	.49	.70	.42	.50
15-Botel-V-Pre	.09	.60	.53	.76	.60	.80	.53
16-Fry-V-Pre	1.00	.31	.20	.65	.17	.24	.66
17-CGDPI-C-Post	.31	1.00	.41	.54	.69	.48	.30
18-Botel-C-Post	.20	.41	1.00	.40	.74	.49	.48
19-Fry-C-Post	.65	.54	.40	1.00	.36	.57	.76
20-CGDPI-V-Post	.17	.69	.74	.36	1.00	.51	.33
21-Botel-V-Post	.24	.48	.49	.57	.51	1.00	.62
22-Fry-V-Post	.66	.30	.48	.76	.33	.62	1.00

Table 7

Correlations Among Pre-Tests and Post-Tests (Total Score, Total Consonants, Total Vowels), Standardized Reading Comprehension and I. Q. Scores for the Consonant Group

	1	2	3	4	5	6	7	8
1-CGDPI-Pre	1.00	.75	.23	.33	.88	.79	.71	.49
2-Botel-Pre	.75	1.00	.54	.39	.54	.93	.42	.32
3-Fry-Pre	.23	.54	1.00	.27	-.16	.25	.04	.18
4-Cloze-Pre	.33	.39	.27	1.00	.24	.43	.06	.83
5-CGDPI-Post	.88	.54	-.16	.24	1.00	.72	.70	.46
6-Botel-Post	.79	.93	.25	.43	.72	1.00	.61	.32
7-Fry-Post	.71	.42	.04	.06	.70	.61	1.00	.39
8-Cloze-Post	.49	.32	.18	.83	.46	.32	.39	1.00
9-Rdg. Comp.	.38	.40	.68	.32	.35	.50	.53	.33
10-I. Q.	.33	.53	.30	.60	.49	.59	.40	.47
11-CGDPI-C-Pre	.95	.71	.11	.31	.89	.74	.62	.54
12-Botel-C-Pre	.72	.93	.37	.25	.54	.86	.32	.38
13-Fry-C-Pre	.18	.55	.92	.25	-.14	.40	-.07	.18
14-CGDPI-V-Pre	.86	.36	.37	.30	.63	.26	.47	.21
15-Botel-V-Pre	.65	.86	.65	.50	.38	.87	.48	.11
16-Fry-V-Pre	.23	.37	.78	.24	-.12	-.09	.19	.12
17-CGDPI-C-Post	.88	.84	-.16	.26	.98	.82	.70	.45
18-Botel-C-Post	.84	.86	.19	.16	.65	.90	.54	.15
19-Fry-C-Post	.65	.50	-.01	.29	.64	.65	.89	.45
20-CGDPI-V-Post	.80	.62	-.15	.16	.90	.73	.59	.42
21-Botel-V-Post	.41	.67	.22	.65	.51	.78	.45	.41
22-Fry-V-Post	.66	.21	.10	-.22	.59	.36	.84	.22

(continued)

Table 7 (continued)

	9	10	11	12	13	14	15
1-CGDPI-Pre	.38	.33	.95	.72	.18	.86	.65
2-Botel-Pre	.40	.53	.71	.93	.55	.36	.86
3-Fry-Pre	.68	.30	.11	.37	.92	.37	.65
4-Cloze-Pre	.32	.60	.31	.25	.25	.30	.50
5-CGDPI-Post	.35	.49	.89	.54	-.14	.63	.38
6-Botel-Post	.50	.59	.74	.86	.40	.26	.87
7-Fry-Post	.53	.40	.62	.32	-.07	.47	.48
8-Cloze-Post	.33	.47	.54	.38	.18	.21	.11
9-Rdg. Comp.	1.00	.42	.30	.30	.58	.53	.46
10-I.Q.	.42	1.00	.36	.36	.26	.17	.71
11-CGDPI-C-Pre	.30	.36	1.00	.73	.12	.68	.55
12-Botel-C-Pre	.30	.36	.73	1.00	.45	.31	.63
13-Fry-C-Pre	.58	.26	.12	.45	1.00	.24	.55
14-CGDPI-V-Pre	.53	.17	.68	.31	.24	1.00	.34
15-Botel-V-Pre	.46	.71	.55	.63	.55	.34	1.00
16-Fry-V-Pre	.69	.18	.06	.16	.50	.43	.58
17-CGDPI-C-Post	.19	.47	.88	.81	-.16	.67	.65
18-Botel-C-Post	.36	.27	.76	.89	.35	.30	.64
19-Fry-C-Post	.36	.43	.58	.43	-.06	.25	.49
20-CGDPI-V-Post	.25	.49	.84	.53	-.10	.51	.62
21-Botel-V-Post	.52	.81	.43	.47	.28	.10	.89
22-Fry-V-Post	.56	.24	.56	.12	-.06	.64	.33

(continued)

Table 7 (continued)

	16	17	18	19	20	21	22
1-CGDPI-Pre	.23	.88	.84	.65	.80	.41	.66
2-Botel-Pre	.37	.84	.86	.50	.62	.67	.21
3-Fry-Pre	.78	-.16	.19	-.01	.15	.22	.10
4-Cloze-Pre	.24	.26	.16	.29	.16	.65	-.22
5-CGDPI-Post	-.12	.98	.65	.64	.90	.51	.59
6-Botel-Post	-.09	.82	.90	.65	.73	.78	.36
7-Fry-Post	.19	.70	.54	.89	.59	.45	.84
8-Cloze-Post	.12	.45	.15	.45	.42	.41	.22
9-Rdg. Comp.	.69	.19	.36	.36	.25	.52	.56
10-I.Q.	.18	.47	.27	.43	.49	.81	.24
11-CGDPI-C-Pre	.06	.88	.76	.58	.84	.43	.56
12-Botel-C-Pre	.16	.81	.89	.43	.53	.47	.12
13-Fry-C-Pre	.50	-.16	.35	-.06	-.10	.28	-.06
14-CGDPI-V-Pre	.43	.67	.30	.25	.51	.10	.64
15-Botel-V-Pre	.58	.65	.64	.49	.62	.89	.33
16-Fry-V-Pre	1.00	-.10	-.13	.05	-.16	.02	.29
17-CGDPI-C-Post	-.10	1.00	.78	.74	.80	.53	.48
18-Botel-C-Post	-.13	.78	1.00	.54	.59	.43	.36
19-Fry-C-Post	.05	.74	.54	1.00	.49	.54	.56
20-CGDPI-V-Post	-.16	.80	.59	.49	1.00	.61	.56
21-Botel-V-Post	.02	.53	.43	.54	.61	1.00	.21
22-Fry-V-Post	.29	.48	.36	.50	.56	.21	1.00

Table 8

Means for Total Scores (Pre- and Post- Tests)
For Total Vowel and Total Consonant
Scores (Pre- and Post- Tests)

Test	Group	N	Pre	Post	Gain
CGDPI:					
Total (104)[a]	V	20	88.10	94.55	6.45
	C	12	92.58	93.58	1.00
Vowels (24)	V		19.10	20.55	1.45
	C		20.00	20.25	0.25
Consonants (80)	V		69.15	73.90	4.75
	C		72.58	73.33	0.75
Botel:					
Total (61)	V	12	36.00	39.00	3.00
	C	13	40.92	43.23	2.31
Vowels (19)	V		8.33	10.91	2.58
	C		10.00	10.92	0.92
Consonants (42)	V		30.33	31.33	1.00
	C		30.92	32.30	1.38
Fry:					
Total (49)	V	16	31.93	34.06	2.13
	C	14	31.14	34.71	3.57
Vowels (18)	V		7.87	8.87	1.00
	C		7.07	8.50	1.43
Consonants (31)	V		24.06	24.93	0.87
	C		24.07	26.21	2.14
Cloze comprehension:					
Total (15)	V	21	10.95	11.33	0.38
	C	14	9.57	11.50	1.93

[a]Number in parenthesis indicates maximum score.

Table 9

Means for Total Vowel Scores and Vowel Subtests (Pre- and Post-Tests)

Subtest	Group	Pre	Post	Gain
CGDPI:				
Total Vowels (24)[a]	V	19.10	20.55	1.45
	C	20.00	20.25	0.25
Short Vowels (5)	V	4.10	4.25	0.15
	C	4.08	4.25	0.17
Long Vowels (9)	V	7.00	8.05	1.05
	C	7.33	7.41	0.08
Difficult Vowels (10)	V	8.00	8.25	0.25
	C	8.58	8.58	0
Botel:				
Total Vowels (19)	V	8.33	10.91	2.58
	C	10.00	10.92	0.92
Short Vowels (5)	V	1.83	2.33	0.50
	C	2.53	2.15	-.38
Long Vowels (5)	V	2.33	2.58	0.25
	C	3.00	2.92	-.08
Difficult Vowels (9)	V	4.16	6.00	1.84
	C	4.46	5.84	1.38
Fry:				
Total Vowels (18)	V	7.87	8.87	1.00
	C	7.07	8.50	1.43
Short Vowels (6)	V	3.43	3.56	0.13
	C	3.00	3.21	0.21
Long Vowels (7)	V	3.31	3.56	0.25
	C	2.92	3.42	0.50
Difficult Vowels (5)	V	1.12	1.75	0.63
	C	1.14	1.85	0.71

[a]Number in parenthesis indicates maximum score.

Table 10

Means for Total Consonant Scores and Consonant Subtests (Pre- and Post-Tests)

Subtest	Group	Pre	Post	Gain
CGDPI:				
Total Consonants (80)[a]	V	69.15	73.90	4.75
	C	72.58	73.33	0.75
Consonants (28)	V	24.75	26.70	1.95
	C	25.58	26.41	0.83
Consonant Blends(38)	V	32.35	34.50	2.15
	C	34.58	34.16	-.42
Consonant Digraphs (8)	V	7.00	7.35	0.35
	C	7.08	7.25	0.17
Silent Consonants (6)	V	5.05	5.35	0.30
	C	5.33	5.50	0.17
Botel:				
Total Consonants (42)	V	30.33	31.33	1.00
	C	30.92	32.30	1.38
Consonants (18)	V	17.16	16.83	-.33
	C	17.23	17.07	-.16
Consonant Blends (19)	V	10.83	11.83	1.00
	C	11.38	12.69	1.31
Consonant Digraphs (5)	V	2.33	2.66	0.33
	C	2.30	2.53	0.23
Fry:				
Total Consonants (31)	V	24.06	24.91	.85
	C	24.07	26.21	2.14
Consonants (24)	V	19.68	20.37	.69
	C	20.07	21.07	1.00
Consonant Blends (1)	V	.81	.81	.0
	C	.57	.64	.07
Consonant Digraphs(6)	V	3.56	3.75	.19
	C	3.42	4.50	1.08

[a]Number in parenthesis indicates maximum score.

II. DISCUSSION

The discussion of the findings includes comments on the data concerning vowel results, consonant results, vowels and consonants combined, the cloze comprehension test, the nature of the testing instruments, and the characteristics of the subjects.

Vowels

An examination of the results of the Mann-Whitney U Test demonstrates that the group receiving instruction in vowel sounds and generalizations did not make significant gains in vowel recognition compared to the group receiving instruction only in consonants. This seems to bear out the findings of Oaks (1952), Clymer (1963), Emans (1967), Burmeister (1968), and others, on the usefulness of vowel generalizations. The comments of Labov (1966), Venezsky (1967), Green (1963), and others, regarding dialect pronunciation versus standard pronunciation, especially pertaining to vowel sounds, is apparently supported. The vowel group did make slightly better gains in total vowels on the CGDPI and Botel Test than did the consonant only group, but these gains were insignificant. The consonant only group had a slightly better gain on the Fry Test in total vowels, again insignificant.

Consonants

Some noteworthy and unexpected results occurred in the consonant testing. Both groups made slight gains in total consonants in all three phonics tests, but these gains were also insignificant despite the fact that the consonant only group spent the entire training period only on consonant material. As a matter of fact, on two sub-tests (CGDPI, "Consonant Blends" and Botel, "Consonants"), the consonant only group showed a very slight loss. The vowel group showed a very slight loss on Botel, "Consonants." On all total tests and sub-tests, however, the insignificant gains and losses can be attributed to the standard error and the brief training period (30 sessions). Nevertheless, the failure of the groups to demonstrate greater gains on the consonant tests than on the vowel tests seems to contradict the experience of Heilman (1964), Gray (1960), McKee (1966), and the investigator's previous teaching experience. Perhaps the results of the pre-testing and post-testing are more a reflection of the nature of the tests and the characteristics of the population than the inherent value of the phonics sounds and generalizations themselves. These factors will be discussed in a later section.

The "greatest" gain demonstrated on any of the tests was by the vowel group on the CGDPI, mainly as a result of a gain in

total consonants, especially blends.

Vowels and Consonants

Generally, both groups did considerably better on consonants for all tests than on vowels; i.e., greater percentages of correct responses were made for consonants on both pre-tests and post-tests. Some exceptions are notable. Both groups did rather well on the vowel sections of the CGDPI. The blend and digraph sections of the Botel Test and the digraph section of the Fry Test caused difficulty.

Cloze Comprehension Test

Both experimental and control groups showed slight gains on the comprehension test with the control group having the better gain. Gains were insignificant. The results of this test in relation to the phonics tests apparently agrees with the findings of Harrington (1953), Harrington and Durrell (1955), Mack (1953), Rudisill (1957), Templin (1954), Tiffin and McKinnis (1940), and Benz and Rosemier (1968).

Nature of the Tests

The investigator submits that some observations concerning the testing instruments employed in the study are relevant to the re-

sults and justified by the data.

Generally, both experimental and control groups performed well on all sections of the Comprehensive Group Diagnostic Phonics Inventory. This was unexpected, particularly on the pre-test. The observation may be offered with some validity that because of the rather high scores on the pre-test, there was not much "room" for improvement on the post-test.

The success of the groups on the CGDPI may be due to any or all of the following factors: (1) The test is auditory in nature and does not require application of phonics skills. (2) The test may be a "recognition" test or a "spelling" test more so than a "reading" test. (3) The testee is provided with too many clues to the correct response. (4) Many of the incorrect responses may be very obviously incorrect. (5) The test may be inherently unreliable. (6) The test may be unsuitable for an older population, such as high school age. (7) The test probably does not include a sufficient number of examples dealing with vowel recognition and includes too many items concerning consonant blends. These factors seem worthy of consideration after utilization of the test in the study. The test is a newly-devised instrument and was being used for the first time in a formal study. The investigator selected the CGDPI for the reasons stated in Chapter III under "Testing

Instruments."

The sections of the Botel Reading Inventory used in the study were concerned with auditory recognition of vowel and consonant sounds. In addition, on the short and long vowel sub-tests, the subjects were required to identify the vowels as being long or short. This proved to be quite difficult since some students may be able to discriminate these vowel sounds but are not able to apply terminology "long" or "short" to the vowels. Both groups showed difficulty with all sections of the test except initial consonants. Success could be attributed to the fact that this section (as well as the other sub-tests) employed actual words as test items. If the testee knew how to spell the words, therefore, he could identify the grapheme in question. Generally, retarded black readers demonstrate somewhat surprising difficulty with consonant blends, both in auditory recognition and in application to word recognition.

The Fry Phonics Inventory appears to be the best indicator of the ability to apply phonics skills since the testee must read the nonsense syllables. Both groups had the most difficulty with this test, particularly in the vowel sections.

The cloze comprehension tests appear to illustrate the difficulty that retarded readers have in applying context clues. Groups scored between 64% and 77% acceptable responses despite

the easy reading level of the material, the fairly direct and explicit context clues, and the interest level of the selections.

Characteristics of the Population

It is the opinion of the investigator that the data of a study dealing with this type of population is greatly influenced by the behavior of the subjects. Consequently, the results may reflect this behavior to a greater degree than the variables being observed. The subject's behavior is often governed by his attitude toward a particular situation. On one occasion, the subject is willing to accept the material and work at it to the best of his ability. At another time, the subject may have no interest in doing the assigned task. Subject behavior is quite unpredictable. This factor could be reflected in pre-test and post-test results. Any kind of testing situation apparently has a negative effect on many of the subjects. This was somewhat true even with the non-threatening tests employed in the study and the investigator's attempts to alleviate the fears of the subjects. Many of the subjects demonstrated a deeply-imbedded lack of motivation for academic work in general and reading in particular. In addition, the material covered during the training period may have been intrinsically uninteresting to many of the subjects despite efforts of the investigator to add variety to

the presentation. All of the above factors may be reflected in the absenteeism and the failure of subjects to complete pre-tests and post-tests.

In regard to the test results, it appears that many of the subjects have the ability to recognize and discriminate sounds, but they show much difficulty in the application of phonics skills to reading, especially in vowel recognition. They do not use phonics skills to attack words. This is reflected in comprehension and vocabulary test results and actual functional ability in normal reading situations.

Other factors related to low standardized reading test scores may include the lack of experiential background, poorly developed vocabulary in standard English, the inability to use context clues, and the inability to cope with timed tests. Low I. Q. scores may be caused, in part, by the high verbal ability required by the Henmon-Nelson Tests as well as some of the above-mentioned factors.

CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

The major purpose of this study was the following: to analyze the differences in phonics knowledge, especially in vowels, and reading comprehension between two groups of retarded readers, mostly black, in the tenth grade. One group received phonics instruction in both vowel and consonant sounds and generalizations. The other group received instruction in consonants only.

A secondary purpose was to correlate the results of pre-tests and post-tests in phonics and reading comprehension with standardized reading test scores and I. Q. scores obtained from prior testing of the subjects.

For 30 daily sessions within their regular English classes, one group was provided with sequential instruction in vowel and consonant sounds and generalizations by the investigator using a variety of materials, including workbooks, film strips, magazines, teacher-designed exercises, and work sheets. Another group received instruction only in consonant sounds and generalizations, with no

direct teaching of vowels.

Measuring instruments included the following: (1) the Comprehensive Group Diagnostic Phonics Inventory, (2) sub-tests dealing specifically with vowel and consonant sounds from the "Phonics Mastery" section of the Botel Reading Inventory, (3) the Fry Brief Individual Phonics Survey, (4) and two selections taken from the Reading Attainment System which served as comprehension tests with the application of the cloze technique. Each of the measuring instruments served as a pre-test and a post-test.

The following results were found:

1. There were no significant differences between the vowel group and the consonant only group in any of the measuring instruments, either for total tests or any vowel and consonant sub-tests.

2. Gains were made by both groups in all total tests and in total vowels and total consonants on all three phonics tests, but all gains were very slight and cannot be attributed to the training.

3. The consonant only group showed no significant gains in consonants compared to the vowel group even though the consonant only group received instruction in consonants only.

4. Both groups generally did better in consonants than in vowels (on percentage of correct responses) on pre-tests and post-tests.

5. Both groups scored best in correct responses on the CGDPI.

6. Both groups scored lowest in correct responses on the Fry Phonics Inventory.

7. Both groups had difficulty with the cloze comprehension test.

II. CONCLUSIONS

Based on the findings of this investigation, the investigator does not feel that the teaching of any phonics has validity for retarded black readers of high school age.

Significant growth was absent for both groups in both vowels and consonants. This could be attributed to a number of factors, including the length of the study, the nature of the testing instruments, and the characteristics of the subjects.

Needs for Additional Research

During the course of this study, the investigator noted needs for further research in the following areas:

Old methods of teaching or re-teaching basic reading skills, especially those of word recognition, to disadvantaged blacks should be re-examined and new techniques should be explored.

Techniques of motivation and establishment of realistic goals for disadvantaged blacks in an academic situation should be investigated.

The construction of new testing instruments and the adaptation of existing tests should be under-taken to provide more reliable measurements in diagnosis and achievement for this population.

Efforts should be pursued to create testing environments which are as nonthreatening as possible in order to produce more

accurate indications of the black disadvantaged student's ability.

Further study should be continued toward possible establishment of a phonic system in black dialect in order to teach sound-symbol relationships.

The utilization of black dialect as a vehicle for teaching reading and other communications skills should continue to be explored.

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APPENDIX I

SUPPLEMENTARY FIGURES

FIGURE A

Basal Reading Programs Emphasizing Phonics Analysis, Lingistic Decoding, and Language Experience

Phonics analysis	Basal Reading Program
American Book Co.	The READ System.
Benefic Press.	Invitation to Adventure Series.
Economy Co.	Phonetic Keys to Reading.
Ginn and Co.	Reading 360.
Harper and Row.	Basic Reading Program.
Macmillan Company.	The Macmillan Reading Program.
McQueen Publishing Co.	The McQueen Basic Readers.
Random House/Singer.	Structural Reading.
Science Research Associates.	The SRA Reading Program.
Science Research Associates.	Distar Reading System.
Scott, Foresman and Co.	Basic Reading Program.
Steck-Vaughn Company.	Reading Essentials Series.

(continued)

Linguistic decoding	Basal reading program

Behavioral Research Laboratories. Project Read.

Benefic Press. Oral Reading and Linguistic Series.

Benziger, Inc. The Linguistic Readers.

Harcourt, Brace and World. Sequential Steps in Reading.

D. C. Heath and Co. Miami Linguistic Readers.

Holt, Rinehart and Winston. Sounds of Language Readers.

Houghton, Mifflin Co. Houghton Mifflin Reading Program.

i/t/a Publications, Inc. Early-to-Read Program.

J. B. Lippincott Co. Basic Reading.

Charles E. Merrill Publishing Co. The Merrill Linguistic Readers.

Webster Division/McGraw Hill Book Co. Programmed Reading.

Language experience	Basal reading program

Follett Educational Corp. City Schools Reading Program.

Macmillan Company. The Bank Street Readers.

Noble and Noble. The Chandler Reading Program.

FIGURE B

Phonics Tests (Buros, 1965)

Test and publisher
California Phonics Survey, California Test Bureau.
Diagnostic Reading Scales, California Test Bureau.
Diagnostic Reading Tests, Committee on Diagnostic Reading Tests, Inc.
Gates-McKillop Reading Diagnostic Tests; Bureau of Publications, Teacher's College, Columbia University.
Group Diagnostic Reading Aptitude and Achievement Tests, C. H. Nevins Printing Co.
McCullough Word-Analysis Tests, Ginn and Co.
Phonics Knowledge Survey; Bureau of Publications, Teacher's College, Columbia University.
Phonovisual Diagnostic Test, Phonovisual Products.
Roswell-Chall Auditory Blending Test, Essay Press.
Roswell-Chall Diagnostic Reading Test of Word Analysis Skills, Essay Press.
Silent Reading Diagnostic Tests: The Developmental Reading Tests, Lyons and Carnahan.
Standard Reading Tests, Chatto and Windus, Ltd.

APPENDIX II

TESTING MATERIALS

Comprehensive Group Diagnostic Phonics Inventory

Item Sheet

	Section 1	Section 2	Section 3
1.	mog	tweld	splaut (awe)
2.	yeed	quisp	stroip
3.	vax	tring	orch
4.	bize	drant	quert
5.	tome	wrand	scroy
6.	jeak	blisk	shar
7.	labe	swack	throi
8.	nid	plign	sproom
9.	caid	pright	skrowp (ouch)
10.	voal	gruck	thead (thee)
11.	rez	smos (z)	schur
12.	pum	snirt	thirp
13.	kune	flust	whaw
14.	yig	frink	sic/gat
15.	wux	clooge (gem)	pa/pon
16.	hoos (saw)	brice (city)	ked/dut
17.		crish	e/tim
18.		slaph	ja/tle/got
19.		knisc	
20.		gloct	

Test Sheet

Section 1

(Circle your response)

0.	a. grut	b. proc	c. grot	d. pruc	e. don't know
1.	a. pag	b. mog	c. pog	d. mag	e. don't know
2.	a. yaet	b. yeet	c. yaed	d. yeed	e. don't know
3.	a. zux	b. vax	c. zax	d. vux	e. don't know
4.	a. baje	b. bije	c. bize	d. baze	e. don't know
5.	a. wome	b. wume	c. tume	d. tome	e. don't know
6.	a. jeak	b. veuk	c. jeuk	d. veak	e. don't know
7.	a. laup	b. lape	c. laub	d. labe	e. don't know
8.	a. nid	b. wiod	c. niod	d. wid	e. don't know
9.	a. taod	b. caod	c. taid	d. caid	e. don't know
10.	a. vool	b. voal	c. voom	d. voam	e. don't know
11.	a. niz	b. rez	c. riz	d. nez	e. don't know
12.	a. pon	b. qon	c. qum	d. pum	e. don't know
13.	a. kune	b. zine	c. zune	d. kine	e. don't know
14.	a. yep	b. qig	c. yig	d. qep	e. don't know
15.	a. nuv	b. wux	c. nux	d. wuv	e. don't know
16.	a. doox	b. hoos	c. hoox	d. doos	e. don't know

NAME _____ CLASS _____

DATE _____

Test Sheet

Section 2

(Circle your response)

0.	a. grut	b. proc	c. grot	d. pruc	e. don't know
1.	a. tweph	b. zeld	c. tweld	d. zeph	e. don't know
2.	a. quipz	b. swisp	c. swipz	d. quisp	e. don't know
3.	a. ching	b. tring	c. chisc	d. trisc	e. don't know
4.	a. drant	b. frax	c. frant	d. drax	e. don't know
5.	a. wramt	b. trand	c. tramt	d. wrand	e. don't know
6.	a. grisk	b. blisk	c. grish	d. blish	e. don't know
7.	a. drack	b. drath	c. swack	d. swath	e. don't know
8.	a. prirg	b. plign	c. plirg	d. prign	e. don't know
9.	a. pright	b. crign	c. prign	d. cright	e. don't know
10.	a. blusk	b. bluck	c. grusk	d. gruck	e. don't know
11.	a. sros	b. smov	c. srov	d. smos	e. don't know
12.	a. slirt	b. snirt	c. snint	d. slint	e. don't know
13.	a. flust	b. pluct	c. plust	d. fluct	e. don't know
14.	a. frimp	b. trink	c. frink	d. trimp	e. don't know
15.	a. crooce	b. clooge	c. crooge	d. clooce	e. don't know
16.	a. blice	b. brixe	c. blixe	d. brice	e. don't know
17.	a. crish	b. cwish	c. crich	d. cwich	e. don't know
18.	a. plaph	b. slach	c. slaph	d. plach	e. don't know
19.	a. knisc	b. tnist	c. tnisc	d. knist	e. don't know
20.	a. gloch	b. ploct	c. gloct	d. ploch	e. don't know

NAME _____ CLASS _____

DATE _____

Test Sheet

Section 3

(Circle your response)

0.	a. grut	b. proc	c. grot	d. pruc	e. don't know
1.	a. splout	b. scraut	c. scrout	d. splaut	e. don't know
2.	a. stroup	b. schoup	c. stroip	d. schoip	e. don't know
3.	a. orch	b. ooch	c. ooth	d. orth	e. don't know
4.	a. quesp	b. thuert	c. thuesp	d. quert	e. don't know
5.	a. spraw	b. scroy	c. scraw	d. sproy	e. don't know
6.	a. shar	b. shaw	c. spraw	d. sprar	e. don't know
7.	a. shroi	b. throi	c. shraw	d. thraw	e. don't know
8.	a. sproim	b. throom	c. sproom	d. throim	e. don't know
9.	a. skrowp	b. sproyp	c. sprowp	d. skroyp	e. don't know
10.	a. thead	b. quead	c. thood	d. quood	e. don't know
11.	a. thrur	b. schoy	c. schrur	d. throy	e. don't know
12.	a. thirp	b. sprirp	c. thoop	d. sproop	e. don't know
13.	a. spraw	b. whaw	c. whoc	d. sproc	e. don't know
14.	a. si/cgat	b. sic/gat	c. sicga/t	d. sicg/at	e. don't know
15.	a. p/apon	b. papo/n	c. pap/on	d. pa/pon	e. don't know
16.	a. ked/dut	b. ked/du/t	c. kedd/ut	d. ke/ddut	e. don't know
17.	a. eti/m	b. e/ti/m	c. e/tim	d. et/im	e. don't know
18.	a. jat/legot	b. jat/leg/ot		c. ja/tle/got	
	d. ja/tleg/ot	e. don't know			

NAME _____ CLASS _____

DATE _____

Response Analysis Sheet
Section 1
Regular consonant sounds and
common long and short vowel sounds
(Circled choices are incorrect)

Phonetic code: long; short; / silent; * consonant

Item number	Response Choices a	b	c	d	e
1.	m o	---	m	o	m o
2.	d e/	d	e/	---	d e/
3.	v a	---	v	a	v a
4.	z i*/	z	---	i*/	z i*/
5.	t	t o*/	o*/	---	t o*/
6.	---	j e/	e/	j	j e/
7.	b a*/	b	a*/	---	b a*/
8.	---	n i	i	n	n i
9.	c a/	a/	c	---	c a/
10.	o/	---	l o/	l	l o/
11.	r e	---	e	r	r e
12.	m u	p u	p	---	p u
13.	---	k u*/	k	u*/	k u*/
14.	g i	y	---	y i g	y g
15.	w x	---	w	x	w x
16.	h s	---	s	h	h s

NAME _____ CLASS _____

DATE _____

Response Analysis Sheet
Section 2

Initial and final consonant blends and digraphs and hard consonants
(Circled choices are incorrect)

Item Number	Response Choices				
	a	b	c	d	e
1.	ld	tw	---	tw ld	tw ld
2.	sp	qu	qu sp	---	qu sp
3.	tr	---	tr ng	ng	tr ng
4.	---	dr nt	dr	nt	dr nt
5.	nd	wr	wr nd	---	wr nd
6.	bl	---	bl sk	sk	bl sk
7.	sw	sw ck	---	ck	sw ck
8.	pl gn	---	gn	pl	pl gn
9.	---	pr ght	ght	pr	pr ght
10.	gr ck	gr	ck	---	gr ck
11.	sm	s	sm s	---	sm s
12.	sn	---	rt	sn rt	sn rt
13.	---	fl st	fl	st	fl st
14.	nk	fr	---	fr nk	fr nk
15.	cl g	---	cl	g	cl g
16.	br	c	br c	---	br c
17.	---	cr	sh	cr sh	cr sh
18.	sl	ph	---	sl ph	sl ph
19.	---	kn sc	kn	sc	kn sc
20.	ct	gl	---	gl ct	gl ct

Response Analysis Sheet
Section 3
Diphthongs, vowels-r, broad o, double o,
short ea, tri-consonant blends, syllabication
(Circled choices are incorrect)

Item Number	Response Choices				
	a	b	c	d	e
1.	au	spl	spl au	---	spl au
2.	oi	str oi	---	str	str oi
3.	---	or	or ch	ch	or ch
4.	rt	qu	qu rt	---	qu rt
5.	scr oy	---	oy	scr	scr oy
6.	---	ar	sh ar	sh	sh ar
7.	thr	---	thr oi	oi	thr oi
8.	oo	pr	---	spr oo	spr oo
9.	---	skr ow	skr	ow	ski ow
10.	---	th (the)	ea	th ea	th ea
11.	sch	ur	---	sch ur	sch ur
12.	---	th	rp	th rp	th rp
13.	wh	---	aw	wh aw	wh aw

	Knows rule	Doesn't know rule
14.	b--when 2 consonants follow a vowel, divide the word between the 2 consonants	c, d, e
15.	d--when only one consonant or diagraph follows a vowel, divide the word after the first vowel	a, b, c
16.	a--same as 14	b, c, d
17.	c--same as 15	a, b, d
18.	c--same as 14 & 15, except whenever le ends a syllable and is preceded by a consonant, the word is divided before the consonant and after the e.	a, b, d

NAME _____ CLASS _____

DATE _____

BOTEL READING INVENTORY A

PHONICS MASTERY TEST

Level A

1. Consonant Sounds

Directions: Listen carefully as I read a group of words. Write the beginning letter of each word after the correct number on your answer sheet. (Note: Since this is a test on sounds, not on spelling, any answer in parentheses should be accepted.)

1.	par	(p)	6.	vamp	(v)	11.	jade	(j)	15.	lair	(l)
2.	batch	(b)	7.	terse	(t)	12.	hulk	(h)	16.	yacht	(y)
3.	malt	(m)	8.	shoot	(s)	13.	zest	(z)	17.	keel	(k, c)
4.	wean	(w)	9.	deft	(d)	14.	nape	(n)	18.	gape	(g)
5.	foil	(f)	10.	ramp	(r)						

2. Consonant Blends

Directions: Now I shall read some other words. Listen carefully and write the first two letters of each word. (Note: Acceptable answers are in parentheses. Since this is a test on sounds, not on spelling, any indicated answer is correct.)

1.	blithe	(bl)	6.	slink	(sl)	11.	gripe	(gr)	16.	snag	(sn)
2.	clog	(cl)	7.	bray	(br)	12.	prance	(pr)	17.	spike	(sp)
3.	flounce	(fl)	8.	crass	(cr)	13.	trek	(tr)	18.	stint	(st)
4.	glum	(gl)	9.	dredge	(dr)	14.	scud	(sc,sk)	19.	swap	(sw)
5.	plush	(pl)	10.	frisk	(fr)	15.	smear	(sm)			

3. Consonant Digraphs

Directions: In the next group of words listen carefully and again write the first two letters: shorn, chide, thence, thatch. Now write the two letters that end this word: sling.

1.	shorn	(sh)	3.	thence	(th)	5.	sling	(ng)
2.	chide	(ch)	4.	thatch	(th)			

Level B

1. Long and Short Vowels

Directions: Listen carefully to the vowel sound in these words. If the vowel is short, write the word short and the letter for the vowel sound. If the vowel is long, write the word long and the letter for the vowel sound. (Correct answers are in parentheses.)

1.	bid	(short i)	6.	stop	(short o)
2.	eve	(long e)	7.	bun	(short n)
3.	flat	(short a)	8.	mile	(long i)
4.	note	(long o)	9.	best	(short e)
5.	cave	(long a)	10.	cute	(long u)

2. Other Vowel Sounds

Directions: Sometimes two vowels work together and have one sound. Some of these vowels are oo, oi, and oy. Also certain consonants, such as r and w, after a vowel change the sound of the vowel. Listen carefully to the words I say. If a word has a vowel team, write the two vowel letters. If a word has a vowel changed by a consonant, write the vowel and the consonant letters. (Correct answers are in parentheses. Some sounds can be spelled more than one way. Since this is a test on sounds, not on spelling, any of the indicated answers should be accepted.)

1.	nook	(oo)	4.	jar	(ar)	7.	boil	(oi, oy)
2.	blouse	(ou, ow)	5.	Troy	(oy, oi)	8.	whirl	(ir, er, ur)
3.	broom	(oo)	6.	claw	(aw, au)	9.	scorn	(or)

NAME_____

FRY PHONICS SURVEY

DATE _____

DIRECTIONS: Please read the following "words" out loud. They are not actual words, but say them the way you would if they were real words.

Section 1

TIF	NEL	ROM
DUP	CAV	SEB

Section 2

KO	HOAB	WAJE
ZEEX	QUIDE	YAIG

Section 3

WHAW	THOIM	PHER
OUSH	CHAU	EANG

Cloze Comprehension Test

Name: Date:

DIRECTIONS: This story is about narcotics and drugs. As you read, you will come to spaces in the story. These spaces mean that words have been left out. When you come to a space, write or print in the space one or more words which you think would make sense or fit in the space. The following sentence is an example: "If you walk home from school, be careful of fast-moving when crossing the street."

Narcotics are drugs that can make an addict out of a person. Once he starts to use such , he can't stop.

Narcotics are dangerous drugs. Laws have been passed to control their use. You can't buy a strong without an OK from a doctor.

There's one drug you can't buy at all. If you do, you're breaking the . Not even a doctor can get it for you. It's one of the worse of all drugs. It's called heroin or "horse."

What does do to those who take it? That depends on the person. Most people don't like it the first time. It makes the user dizzy. It also makes him to his stomach. It makes him throw up.

But it does something else, too. It can make him feel as if he had no troubles at all. A taking heroin may get a real thrill--called a "kick." Or he may feel he's in a kind of dream. That's called a "high."

A man who keeps taking heroin gets . This always happens, if he takes it often enough. No one knows why. It's just part of the way the drug works.

Here's what happens when a guy gets hooked:

a. He feels he needs the drug all the time. The only time life is worth to him is when he's feeling its effects.

b. He needs more and more of the drug. The small that he started off with won't do anything for him. He needs bigger and bigger doses. And he needs them more often.

c. His body gets to need the . If he stops taking it, he gets . He has pains in his muscles and bones. He has bad stomach pains. He can't sleep. The only cure is to wait for two or three weeks--or to get a shot of .

An addict can't live a normal life with the drug. And he can't live a normal without it. So he spends his whole life getting heroin. Day after day he tries to get enough for a high.

Can an get cured? It's possible. Some addicts kick the habit and don't go back. But most of them can't do it. But sooner or later, they go back to it. They know what is happening to them. But heroin is their life.

For most addicts, heroin is a one-way street.

Cloze Comprehension Test

Name: Date:

DIRECTIONS: This story is about the history of rock music. As you read, you will come to spaces in the story. These spaces mean that words have been left out. When you come to a space, write or print in the space one or more words which you think would make sense or fit in the space. The following sentence is an example: "If you walk home from school, be careful of fast-moving _____ when crossing the street."

"Crazy, Man, Crazy!" That was the first big Rock and Roll hit, back in 1951. And "crazy" is what some people called the new _____. They said it ought to be stopped. They said it would not last. Yet Rock and Roll kept going.

Where did _____ come from? Well, after World War II, "swing" music played by big bands was the thing. But swing played itself out after the _____. A way-out type of jazz called "bop" came in. But most people could not understand bop. There were lots of styles in popular music. But no main style.

Then Rock and Roll hit. No one _____ thought it up. It just grew. Half of it came from a form of black blues with a big beat. This style was called "Rhythm and Blues." The other

of Rock and Roll came from "Country and Western" music. Half blues, half hillbilly, the rocking beat swept the country.

The DJ's, or disc jockeys, helped Rock and Roll catch on. The big shows moved from to TV. The DJ's took over radio. And they played a lot of Rock and Roll. One DJ, Alan Freed, may have thought of the name "Rock and Roll."

Elvis Presley was the first super of Rock and Roll. Teenagers loved him. They mobbed him wherever he went. Elvis stayed king for three big years. He was on until he got drafted.

In the lat 19 5 0's, Rock and Roll gave birth to a new dance. This dance was the . Even grown-upsdanced the Twist. And after the Twist came the Frug, and other dances based on the .

Then, about 1963, along came new kings of Rock and Roll, the Beatles. When they visited from England, it was almost like Elvis Presley all over again. But something different happened this time. Grown-ups soon found that they liked the , too.

Rock and Roll now has many sounds. There are lots of stars with many different styles. Groups like the Supremes don't

sound like the Beatles at all. Rock groups have sprung up all over the . There are Rock groups as far off as Japan!

Some Rock sounds like folk music. That's called "Folk ." Other Rock gets some of its sound from the music of India. One part of Indian is called "raga." So this style is called "Raga Rock."

It looks like Rock will be around a while yet.